

CLAIM AMENDMENTS

Please delete claims 1 - 9 without prejudice.

1 - 17 (cancelled)

18. (original) An integrated radio comprises:

receiver section operably coupled to convert an inbound radio frequency (RF) signal into an inbound intermediate frequency signal;

transmitter section operably coupled to convert an outbound intermediate frequency signal into an outbound radio frequency signal (RF); and

transformer balun operably coupled to receive the inbound RF signal from an antenna and to provide the outbound RF signal to the antenna, wherein the transformer balun includes:

primary winding having at least one primary turn, wherein the at least one primary turn is substantially symmetrical, and wherein the primary winding is on at least one dielectric layer; and

secondary winding having at least one secondary turn, wherein the at least one secondary turn is substantially symmetrical, and wherein the secondary winding is on at least one other dielectric layer and is magnetically coupled to the primary winding.

19. (original) The integrated radio of claim 18, wherein the at least one primary turn further comprises:

a plurality of turns on a first one of the at least one dielectric layer; and

a plurality of metal bridges on a second one of the at least one dielectric layer, wherein the plurality of metal bridges are operably connected to the plurality of turns to provide the primary winding.

20. (original) The integrated radio of claim 18, wherein the at least one secondary turn further comprises:

a plurality of turns on a first one of the at least one other dielectric layer; and

a plurality of metal bridges on a second one of the at least one other dielectric layer, wherein the plurality of metal bridges are operably connected to the plurality of turns to provide the secondary winding.

21. (original) The integrated radio of claim 18 further comprises:

the primary winding including an interwoven spiral-type primary inductor; and

the secondary winding including an interwoven spiral-type secondary inductor that is substantially symmetrical to the primary winding.

22. (original) The integrated radio of claim 21 further comprises:

the interwoven spiral-type primary inductor including a first number of multiple turns; and

the interwoven spiral-type secondary inductor including a second number of multiple turns.

23. (original) The integrated radio of claim 18, wherein the secondary winding further comprises:

a center tap operably connected to ground to provide a differential signal at end ports of the secondary winding.

24. (original) The integrated radio of claim 18, wherein the at least one primary turn further comprises:

at least one turn on a first one of the at least one dielectric layer;

at least one other turn on a second one of the at least one dielectric layer; and

a plurality of vias operably connecting the at least one turn on the first one of the at least one dielectric layer in parallel to the at least one other turn on the second one of the at least one dielectric layer to provide the primary winding.

25. (original) The integrated radio of claim 18, wherein the at least one secondary turn further comprises:

at least one turn on a first one of the at least one other dielectric layer;

at least one other turn on a second one of the at least one other dielectric layer; and

a plurality of vias operably connecting the at least one turn on the first one of the at least one other dielectric layer in parallel to the at least one other turn on the second one of the at least one other dielectric layer to provide the secondary winding.

26. (original) The integrated radio of claim 18 further comprises:

a substrate, wherein the at least one dielectric layer of the primary winding is on the substrate, wherein the at least one other dielectric layer of the secondary winding is on the substrate such that the primary winding is magnetically and capacitively coupled to the secondary winding.